

IN THE CLAIMS

Please cancel claims 21-69. Applicants will prosecute original claims 1-20 as follows:

1. A composition comprising a reaction mixture comprising a complex of a bacterial RlmA protein, or an rRNA binding fragment thereof, and an rRNA that binds said protein.

2. The composition of claim 1, comprising an rRNA binding domain of said RlmA protein.

3. The composition of claim 1, further comprising a compound being tested for inhibitory activity against a bacterial strain.

4. The composition of claim 1, wherein the bacterial RlmA protein or the rRNA is detectably labeled.

5. A method of identifying compounds having inhibitory activity against a bacterial strain, comprising:

a) preparing a reaction system comprising a bacterial RlmA protein or a rRNA binding domain thereof, a rRNA that binds said protein or binding domain thereof, and a candidate compound; and

b) detecting extent of binding between the bacterial RlmA protein and the rRNA, wherein reduced binding between the bacterial RlmA protein and the rRNA in the presence of the compound relative to a control is indicative of inhibitory activity of the compound against the bacterial strain.

6. The method of claim 5, wherein the bacterial RlmA protein or rRNA binding domain thereof is immobilized on a solid support.

7. The method of claim 5, wherein the candidate compound is added to the reaction system prior to or simultaneously with the bacterial RlmA protein and the rRNA.

8. The method of claim 5, wherein the candidate compound is added to the reaction system subsequent to addition of the bacterial RlmA protein and the rRNA.

9. The method of claim 5, further comprising labeling the rRNA, bacterial RlmA protein or rRNA binding domain thereof with the detectable label, prior to said detecting.

10. The method of claim 9, wherein the detectable label comprises an antibody or fragment thereof that binds the bacterial RlmA protein or rRNA binding domain thereof.

11. The method of claim 9, wherein the detectable label comprises an enzyme and the reaction system further comprises a substrate for the enzyme.

12. The method of claim 9, wherein the detectable label comprises a radioisotope.

13. The method of claim 9, wherein the detectable label comprises a fluorescent label.

14. The method of claim 5, wherein said detecting is conducted via fluorescent resonance energy transfer.

15. The method of claim 5, wherein said detecting is conducted via fluorescence polarization anisotropy measurements.

16. The method of claim 5, wherein the bacterial RlmA protein or rRNA binding fragment thereof is present in the reaction system as a fusion protein with glutathione-S-transferase.

17. The method of claim 5, wherein the method of identification comprises a high throughput screening assay.

18. A method of identifying compounds having inhibitory activity against a bacterial strain, comprising:

a) preparing a reaction system comprising a bacterial RlmA protein of a bacterial strain of a rRNA binding domain thereof, a rRNA that binds said protein or binding domain thereof, and a candidate compound;

b) detecting extent of binding between the bacterial RlmA protein and the rRNA, wherein reduced binding between the bacterial RlmA protein and the rRNA in the presence of the compound relative to a control is indicative of inhibitory activity of the compound against the bacterial strain; and